AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A communication system for noise suppression comprising:

first logic configured to combine a time series of input symbols, where the time series has size N and N is greater than one, into a block of N-symbol combinations, where each of the input symbols is taken from a signaling constellation and is associated with one of a plurality of different channels; and

second logic configured to transmit each N-symbol combination, on ~~a separate channel~~ one of the plurality of different channels, to a receiver.

2. (Original) The system of claim 1, further comprising:

third logic configured to receive a transmitted signal; and

fourth logic configured to combine the block of N-symbol combinations in order to recover the time series of input symbols.

3. (Original) The system of claim 1, wherein each N-symbol combination in the block appears simultaneously as an output of the first logic.

4. (Original) The system of claim 1, where each N-symbol combination contains a weighted sample of all of the input symbols.

5. (Original) The system of claim 1, where the second logic transmits all N-symbol combinations simultaneously.

6. (Original) The system of claim 1, further comprising logic to scale each of the input symbols by a scale factor.

7. (Original) The system of claim 2, where noise energy present in each of the time series of input symbols is spread among at least one of the N-symbol combinations such that the noise energy is reduced.

8. (Original) The system of claim 2, further comprising logic configured to re-interleave the block of N-symbol combinations in order to generate error signals used to update adaptive algorithms.

9. (Original) The system of claim 2, further comprising:

fifth logic configured to de-interleave the block of N-symbol combinations to produce a block of N de-interleaved reference symbols;

sixth logic configured to re-interleave the block of N de-interleaved reference symbols to produce a block of N interleaved reference symbols;

seventh logic configured to update a decision feedback equalizer with each of the N interleaved reference symbols.

10. (Currently Amended) A method for noise suppression comprising the steps of:

combining a time series of input symbols, where the time series has size N and N is greater than one, into a block of N-symbol combinations, where each of the input symbols is taken from a signaling constellation and is associated with a different channel; and

transmitting each N-symbol combination, on a separate channel, to a receiver.

11. (Original) The method of claim 10, further comprising the steps of:

receiving a transmitted signal; and

combining the block of N-symbol combinations in order to recover the time series of input symbols.

12. (Currently Amended) A communication system for noise suppression comprising:

[[a]] means for combining a time series of input symbols, where the time series has size N and N is greater than one, into a block of N-symbol combinations, where each of the input symbols is taken from a signaling constellation and is associated with a separate channel; and

~~logic configured to transmit~~ means for transmitting each N-symbol combination, on ~~a separate channel~~ one of the separate channels, to a receiver.

13. (Original) The system of claim 12, further comprising:

logic configured to receive a transmitted signal; and

means for combining the block of N-symbol combinations in order to recover the time series of input symbols.

14. (Original) The system of claim 13, further comprising means for re-interleaving the block of N-symbol combinations in order to generate error signals used to updated adaptive algorithms.

15. (Original) The system of claim 13, further comprising:

means for de-interleaving the block of N-symbol combinations to produce a block of N de-interleaved reference symbols;

means for re-interleaving the block of N de-interleaved reference symbols to produce a block of N interleaved reference symbols;

means for updating a decision feedback equalizer with the each of the block of N interleaved reference symbols.

16. (Currently Amended) A program embodied in a computer-readable medium, the program comprising:

first logic configured to combine a time series of input symbols, where the time series has size N and N is greater than one, into a block of N-symbol combinations, where each of the input symbols is taken from a signaling constellation and is associated with a different channel; and

second logic configured to transmit each N-symbol combination, on a separate channel, to a receiver.

17. (Original) The system of claim 16, further comprising:

third logic configured to receive a transmitted signal; and

fourth logic configured to combine the block of N-symbol combinations in order to recover the time series of input symbols.

18. (Original) The system of claim 16, wherein each N-symbol combination in the block appears simultaneously as the output of the first logic.

19. (Original) The system of claim 16, where each N-symbol combination contains a weighted sampled of all of the input symbols.

20. (Original) The system of claim 16, where the second logic transmits all N-symbol combinations simultaneously.